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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/604,593	08/01/2003	Richard P. Kolb	SSPI0015.001	1592
26629	7590	03/15/2006	EXAMINER	
ZIOLKOWSKI PATENT SOLUTIONS GROUP, SC (ZPS)			ROJAS, BERNARD	
14135 NORTH CEDARBURG ROAD			ART UNIT	
MEQUON, WI 53097			PAPER NUMBER	
			2832	

DATE MAILED: 03/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/604,593	Applicant(s) KOLB ET AL.	
	Examiner Bernard Rojas	Art Unit 2832	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,5-17,22 and 25-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 28 and 29 is/are allowed.
- 6) ☒ Claim(s) 1,2,5-8,11-17,22 and 25-27 is/are rejected.
- 7) ☒ Claim(s) 9 and 10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 10/31/2005 have been fully considered but they are not persuasive. Shlomi et al. [US 6,199,587] discloses a solenoid housing in the form of a magnetically conductive shell.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "solenoid housing" must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New

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Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 5-8 11-17, 22 and 25-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Shlomi et al. [US 6,199,587].

Claim 1, Shlomi et al. discloses a solenoid [10] comprising:

a magnetically conductive shell [30, 87, 70] having a single coil [35] of wound wire;

a movable magnetic object [42] disposed within a bore of the single coil, the object configured to receive a magnetic force when current is induced in the single coil;

a permanent magnet [72] having a fixed polarity that magnetically repels the movable magnetic object when current is induced in the single coil and magnetically attracts an end of the movable magnetic object when no current is induced in the single coil; and

a non-magnetic spacer [44] disposed between the permanent magnet and the movable magnetic object

Claim 2, Shlomi et al. discloses that the movable magnetic object is a plunger [figure 1].

Claim 5, Shlomi et al. discloses an end plate [30] with an attracting stud [58] connected thereto.

Claim 6, Shlomi et al. discloses a housing having the coil, the plunger, the spacer and the bobbin disposed therein [figure 1].

Claim 7, Shlomi et al. discloses that the single coil is wrapped around a bobbin [32].

Claim 8, Shlomi et al. discloses a number of shunt components [34] connected to the bobbin.

Claims 11 and 22, Shlomi et al. discloses an electromagnetic switching apparatus comprising:

- a bobbin [32] having a single coil [35] of wire wrapped there around;

- a movable armature [42] disposed within the single coil; and

- a permanent magnet [72] separated from the armature by a non-magnetic spacer [44] wherein the permanent magnet magnetically attracts the armature when the coil is de-energized and magnetically repels the armature when the coil is energized.

Claim 12, Shlomi et al. discloses that an end plate [30] and attracting stud [58] connected to one end of the bobbin wherein the attracting stud attracts the armature when the single coil is energized [figure 1].

Claim 13, Shlomi et al. discloses that a return spring [62] is operationally connect to bias the moveable magnetic object in a return position against the spacer when no current is induced in the single coil.

Claim 14, Shlomi et al. discloses the apparatus of claim 13 wherein the armature is further configured to have a first polarity when the single coil is de-energized and a second polarity when the single coil is energized [detx paragraphs 18 and 19].

Claim 15, Shlomi et al. discloses the apparatus of claim 14 wherein the second polarity matches a plurality of the permanent magnet [detx paragraphs 18 and 19].

Claim 16, Shlomi et al. discloses that the second polarity is opposite to a polarity of the end plate [detx paragraphs 18 and 19].

Claim 17, Shlomi et al. discloses a plurality of shunt components [34, 54] disposed radially around the actuator between the single coil and the permanent magnet.

Claims 23 and 25-27, as previously discussed in claim 11, it would have been obvious for one of ordinary skill in the art at the time in invention was made to put the components in kit form in order to facilitate on-site assembly of the solenoids [figure 1].

Claim 24, as previously discussed in claim 12, it would have been obvious for one of ordinary skill in the art at the time in invention was made to put the components in kit form in order to facilitate on-site assembly of the solenoids.

Allowable Subject Matter

Claims 28 and 29 are allowed.

Claims 9-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bernard Rojas whose telephone number is (571) 272-1998. The examiner can normally be reached on M-F 8-4:00, every other Friday off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin G. Enad can be reached on (571) 272-1990. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Bernard R. Gai
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[Signature]
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